

Abstract of the Disclosure

A family of isolated and purified proteins and nucleic acids are disclosed. Particularly, *piwi* family proteins and cDNAs encoding the same are disclosed. Recombinant host cells, recombinant nucleic acids, recombinant proteins and
5 transgenic animals are also disclosed, along with methods of producing each. Isolated and purified antibodies to *piwi* family homologs, and methods of producing the same, are also disclosed. *piwi* family gene products are characterized as having activity in the growth, proliferation and self-renewing division of stem cells, and proliferation of primordial germ cells. Thus,
10 therapeutic, screening, culturing and transgenic methods involving these activities are also disclosed.

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